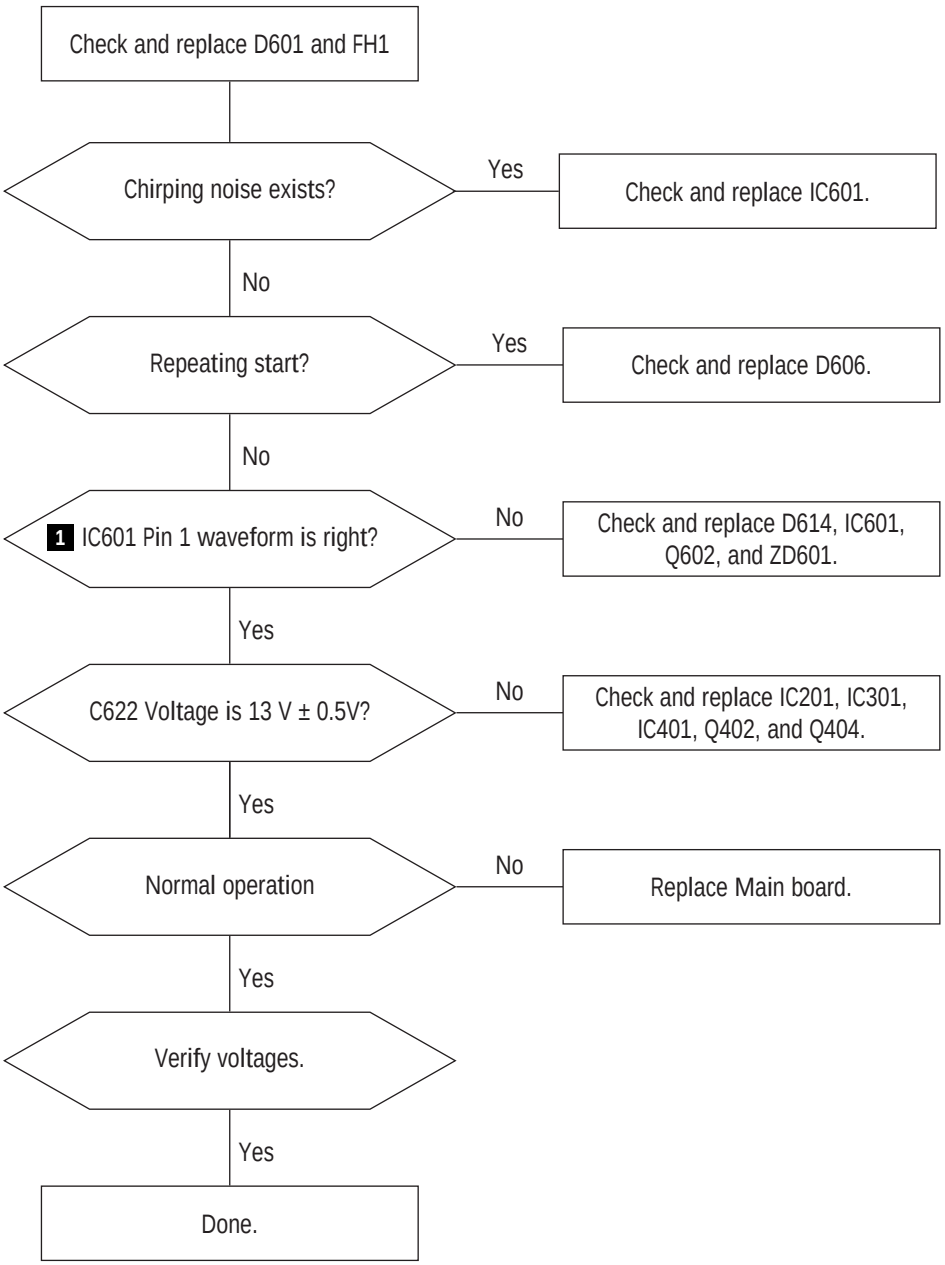
5 Troubleshooting

5-1 Parts Level Troubleshooting

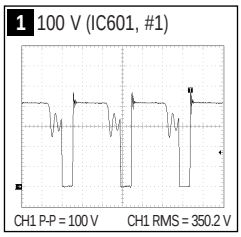
Notes: 1. If a picture does not appear, fully rotate the brightness and contrast controls clockwise and reinspect.

2. Check the following circuits.
   - No raster appears: Power circuit, Horizontal output circuit.
   - High voltage develops but no raster appears: Video output circuits.
   - High voltage does not develop: Horizontal output circuits.

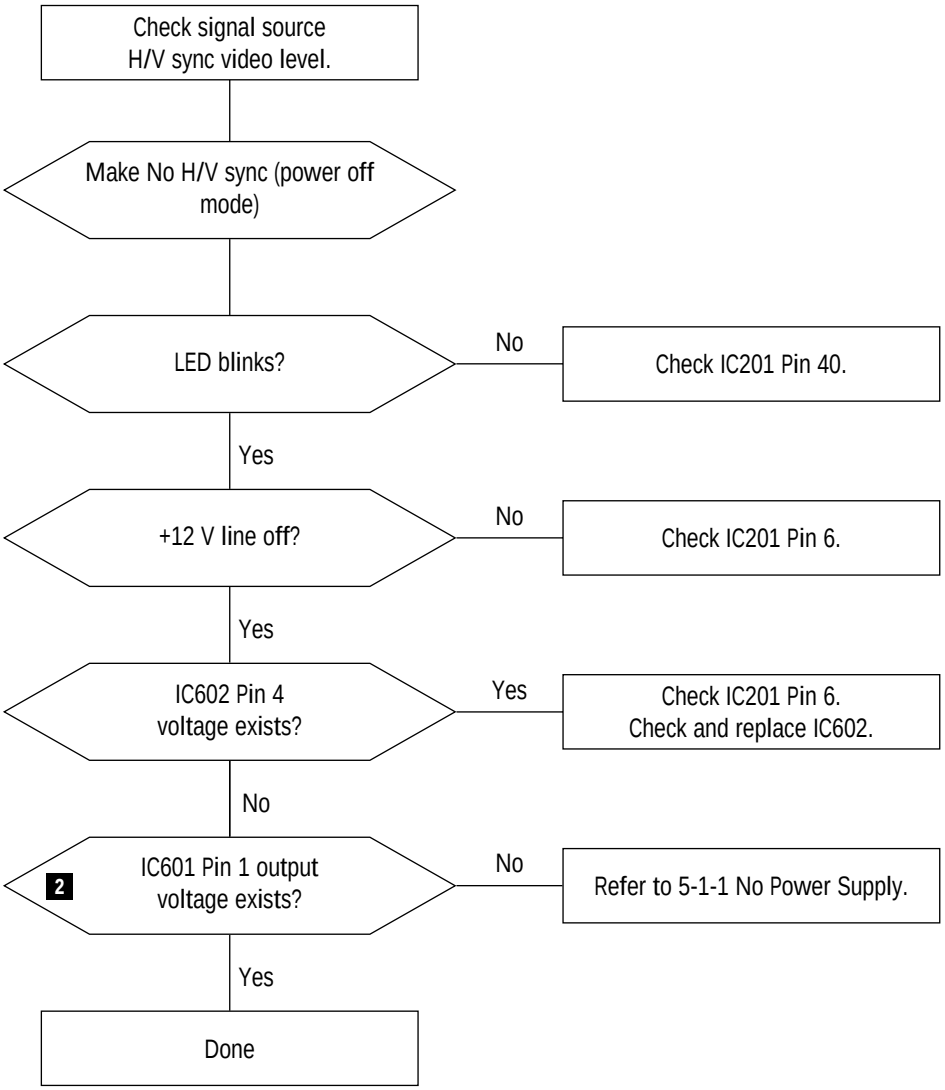
5-1-1 No Power Supply



WAVEFORMS

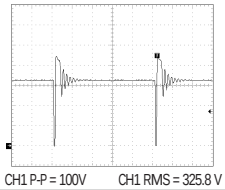


5-1-2 DPMS Failure

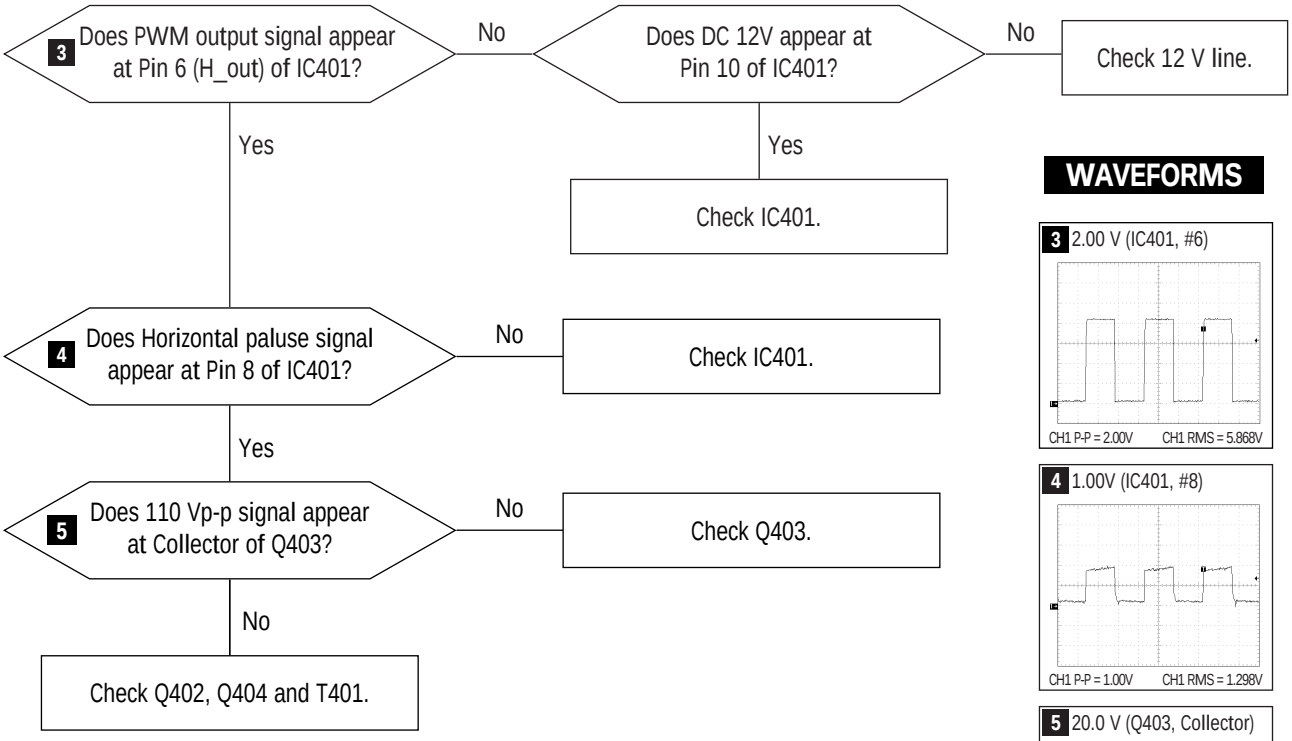


WAVEFORMS

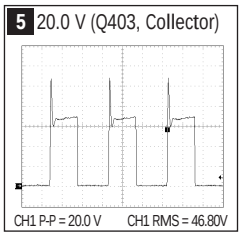
2 100V (IC601, #1)



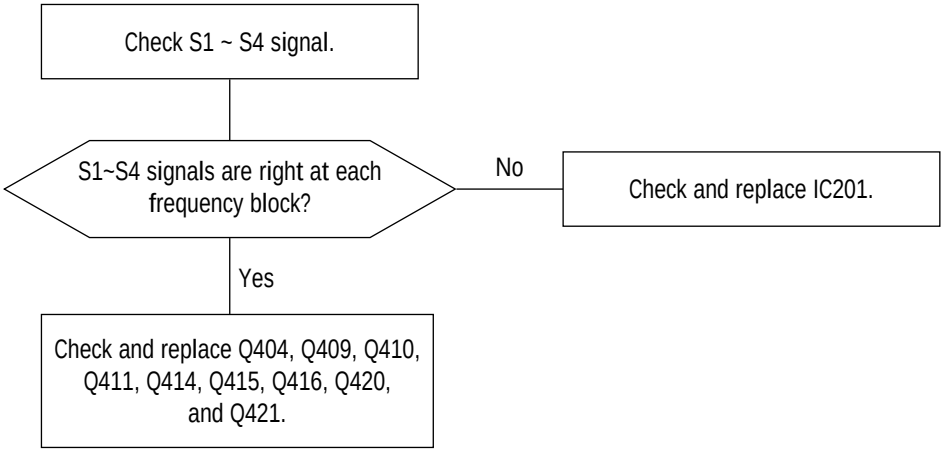
5-1-3 H_Deflection Failure



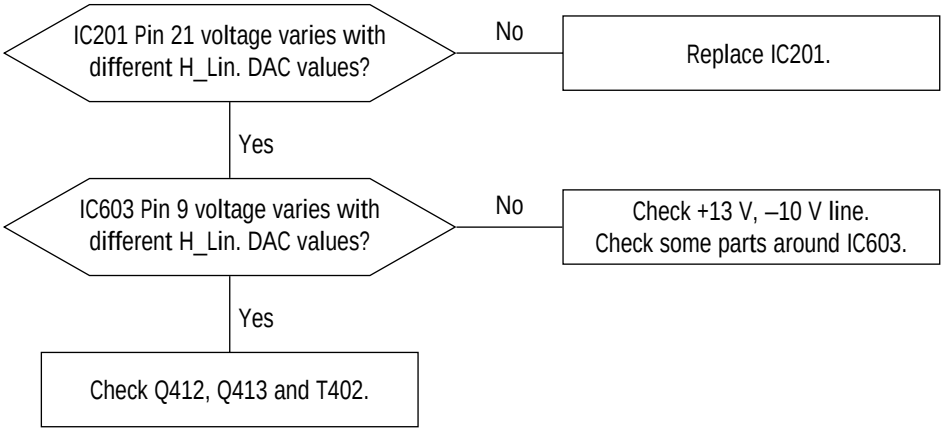
WAVEFORMS



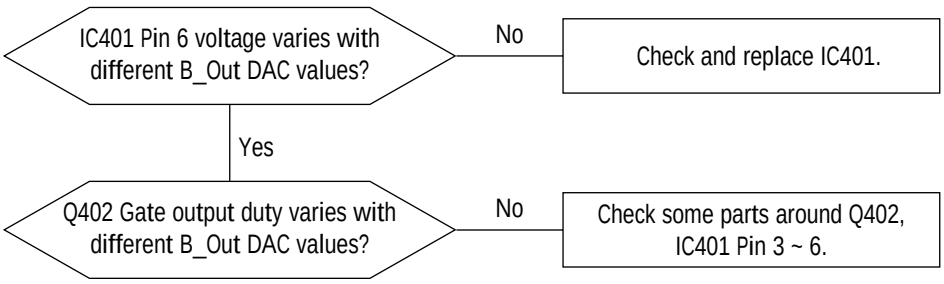
5-1-4 S Correction Failure


Check S1 ~ S4 signal.
S1~S4 signals are right at each frequency block?
No
Check and replace IC201.
Yes
Check and replace Q404, Q409, Q410, Q411, Q414, Q415, Q416, Q420, and Q421.

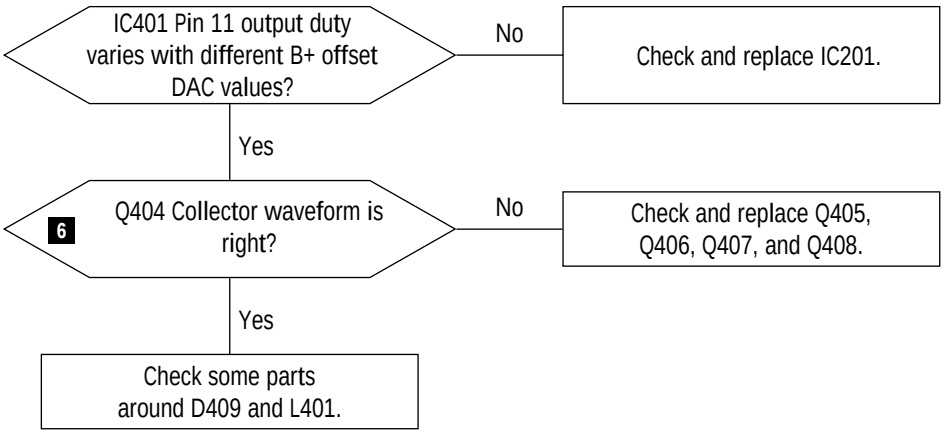
5-1-5 H_Lin. Failure


IC201 Pin 21 voltage varies with different H_Lin. DAC values?
No
Replace IC201.
Yes
IC603 Pin 9 voltage varies with different H_Lin. DAC values?
No
Check +13 V, –10 V line.
Check some parts around IC603.
Yes
Check Q412, Q413 and T402.

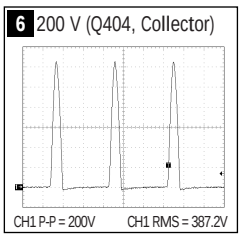
5-1-6 Invariable H_Size


IC401 Pin 6 voltage varies with different B_Out DAC values?
No
Check and replace IC401.
Yes
Q402 Gate output duty varies with different B_Out DAC values?
No
Check some parts around Q402, IC401 Pin 3 ~ 6.

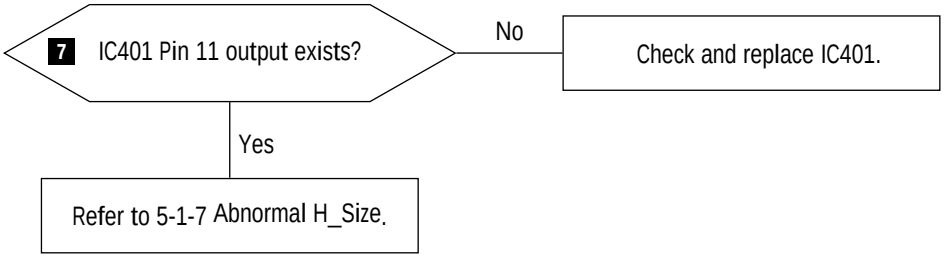
5-1-7 Abnormal H_Size


IC401 Pin 11 output duty varies with different B+ offset DAC values?
No
Check and replace IC201.
Yes
6
Q404 Collector waveform is right?
No
Check and replace Q405, Q406, Q407, and Q408.
Yes
Check some parts around D409 and L401.

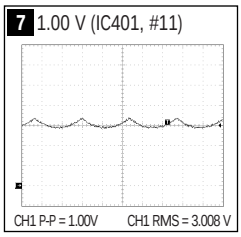
WAVEFORMS



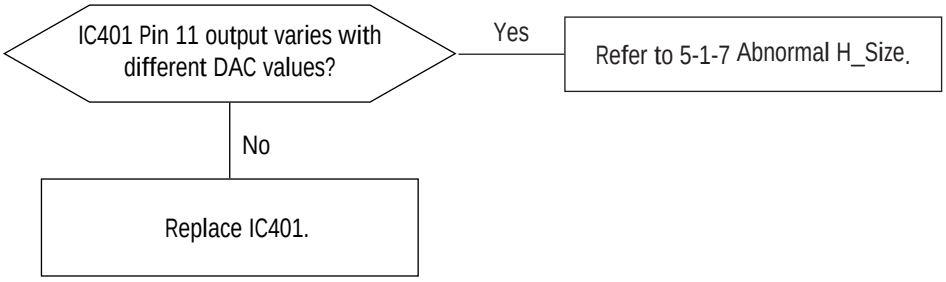
5-1-8 Side Pin or Trap Failure



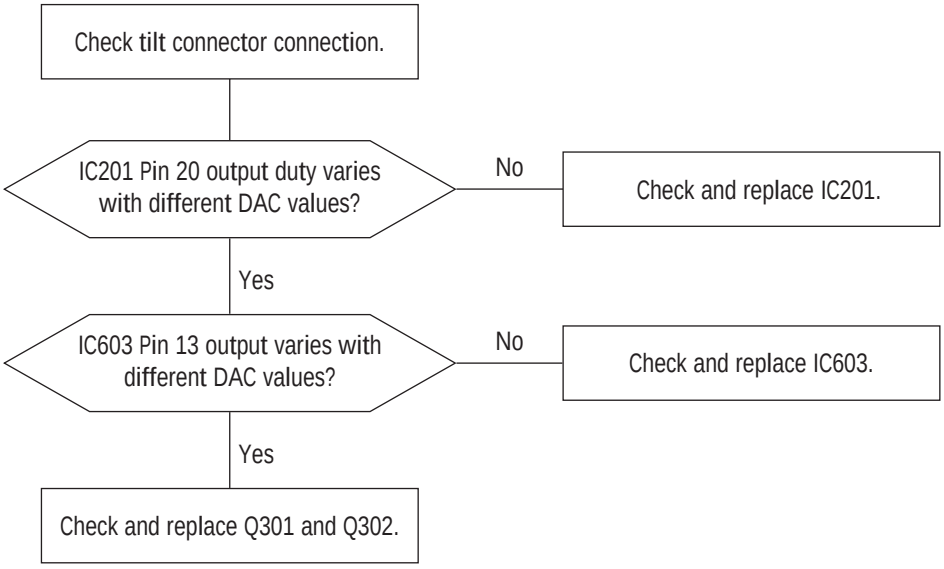
WAVEFORMS



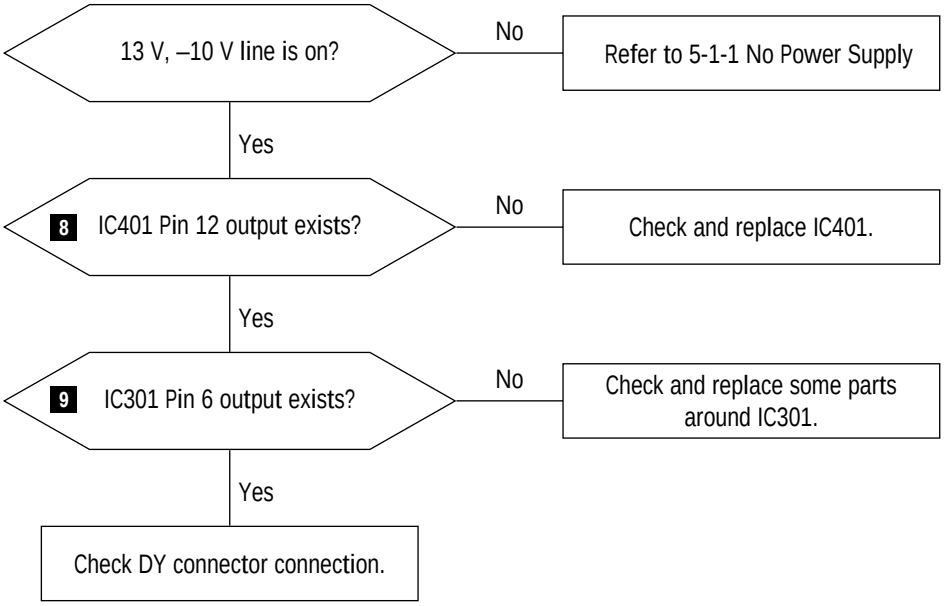
5-1-9 Para. or Pin Balance Failure



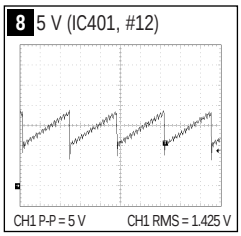
5-1-10 Tilt Failure

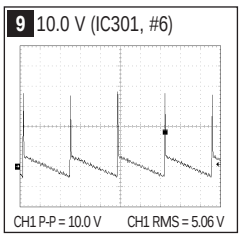

Check tilt connector connection.
IC201 Pin 20 output duty varies with different DAC values?
No
Check and replace IC201.
Yes
IC603 Pin 13 output varies with different DAC values?
No
Check and replace IC603.
Yes
Check and replace Q301 and Q302.

5-1-11 V Deflection Failure

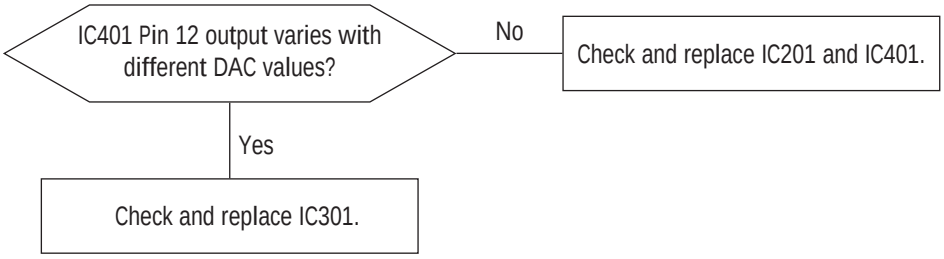


WAVEFORMS

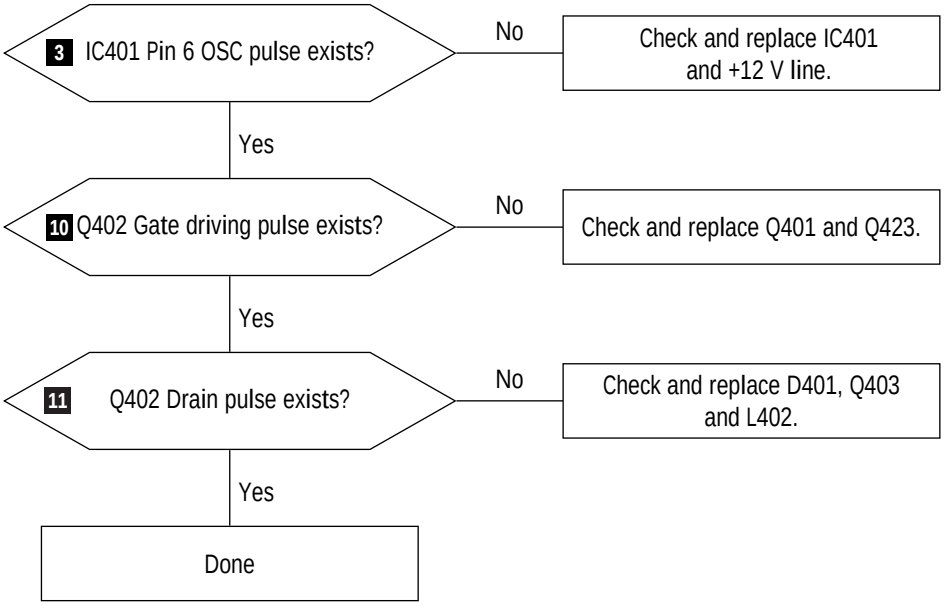




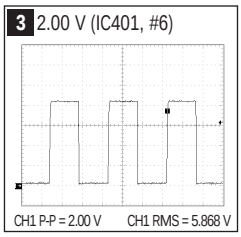
5-1-12 V Size or Pos. Variation Failure

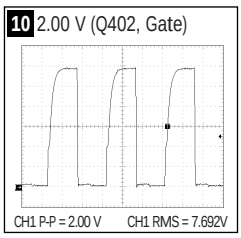


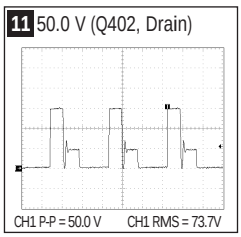
5-1-13 High Voltage Failure



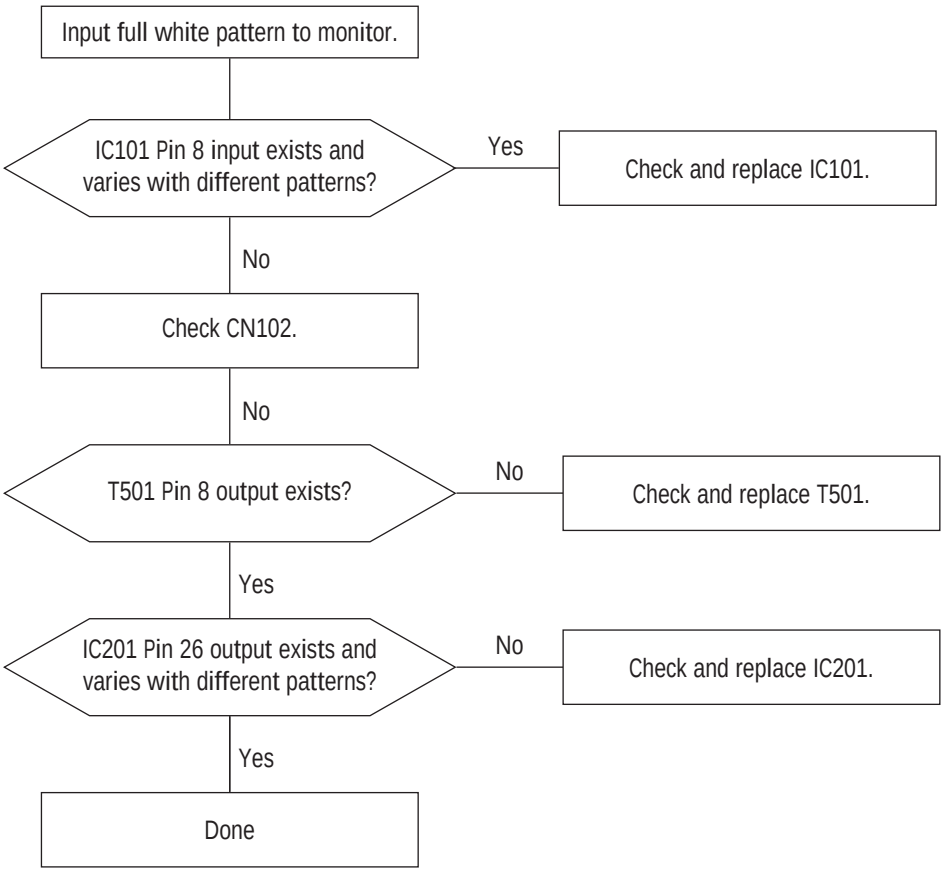
WAVEFORMS



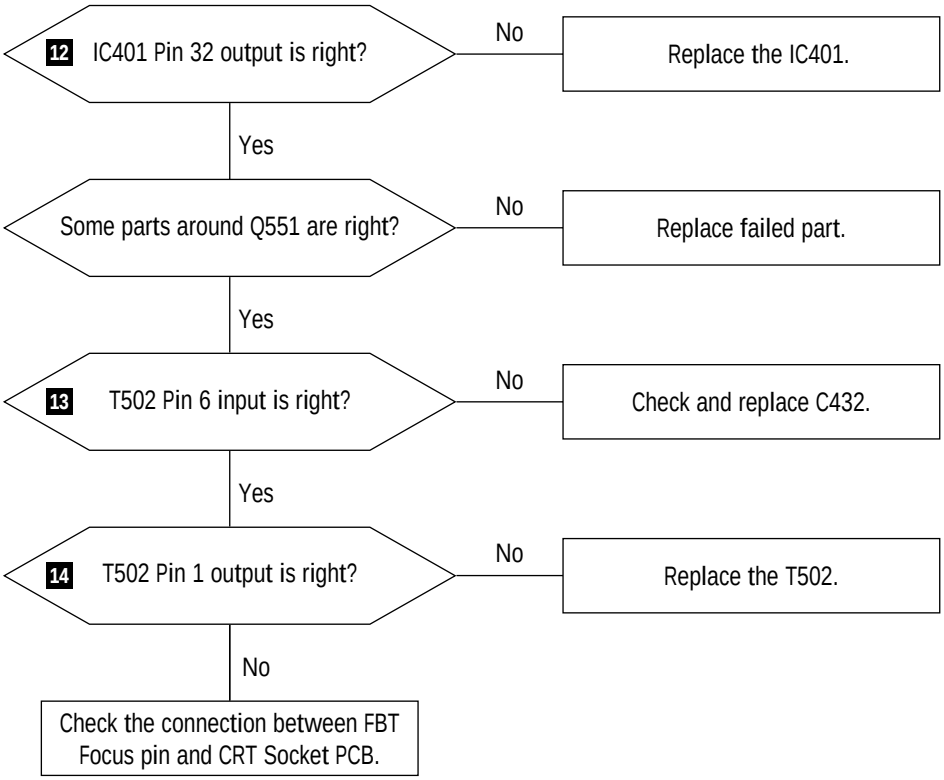




5-1-14 ABL Failure

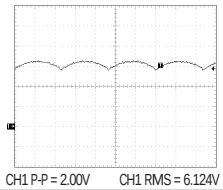


5-1-15 Dynamic Focus Failure

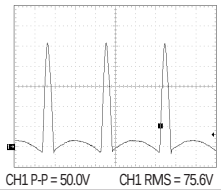


WAVEFORMS

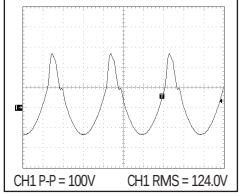
12 2.00 V (IC401, #32)



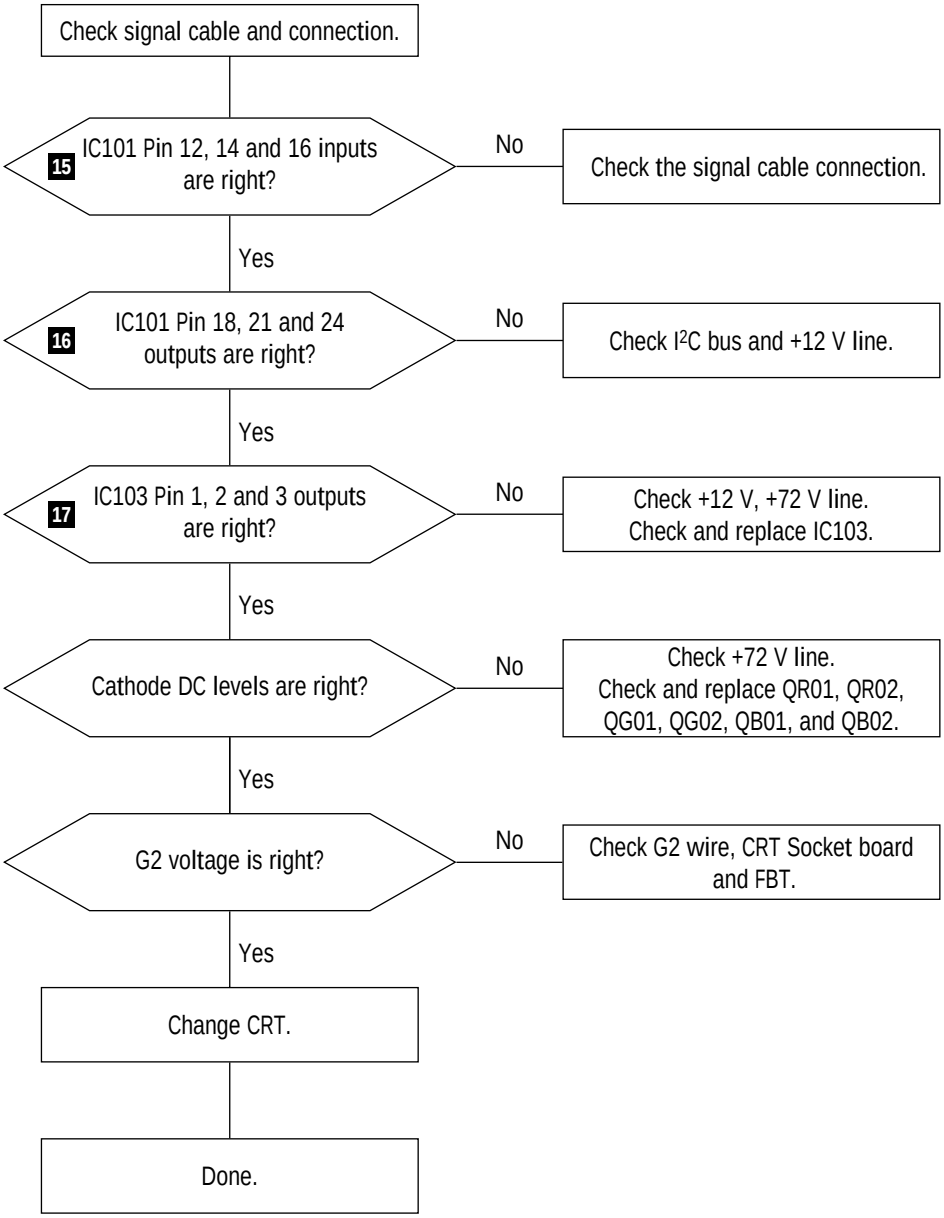
13 50.0 V (T502, #6)



14 100 V (T502, #1)

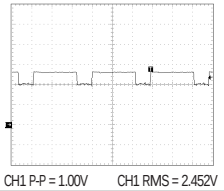


5-1-16 No Video

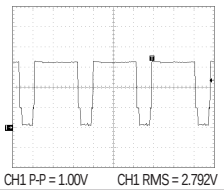

Check signal cable and connection.
15 IC101 Pin 12, 14 and 16 inputs are right?
No
Check the signal cable connection.
Yes
16 IC101 Pin 18, 21 and 24 outputs are right?
No
Check I2C bus and +12 V line.
Yes
17 IC103 Pin 1, 2 and 3 outputs are right?
No
Check +12 V, +72 V line.
Check and replace IC103.
Yes
Cathode DC levels are right?
No
Check +72 V line.
Check and replace QR01, QR02, QG01, QG02, QB01, and QB02.
Yes
G2 voltage is right?
No
Check G2 wire, CRT Socket board and FBT.
Yes
Change CRT.
Done.

WAVEFORMS

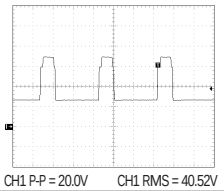
15 1.00 V (IC101,#12,14,16)



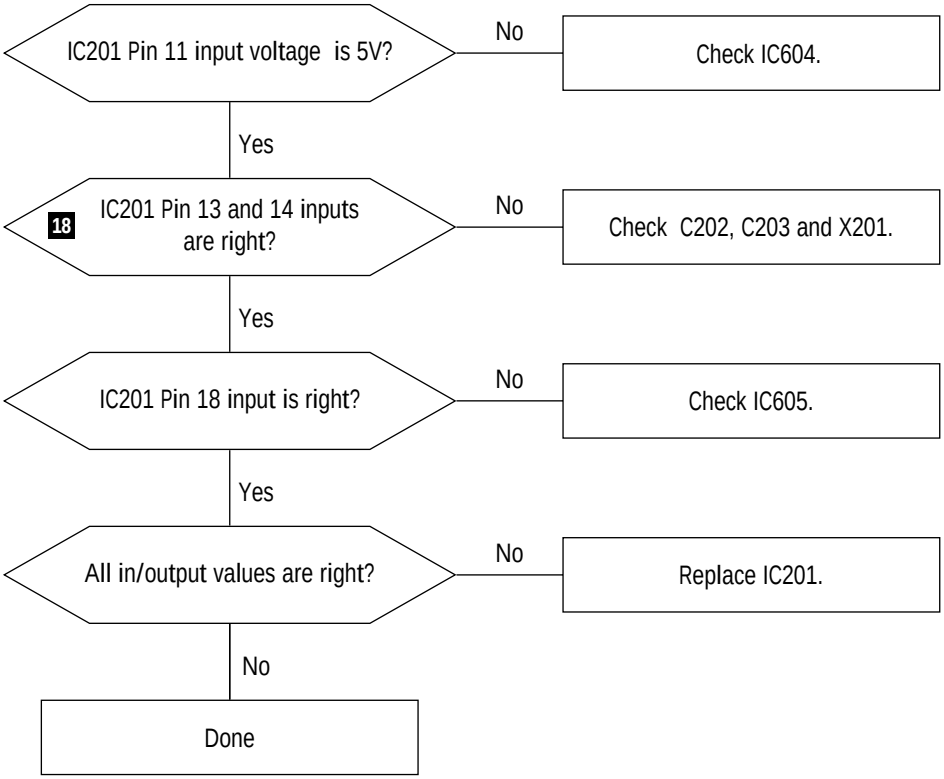
16 1.00 V (IC101, #18,21,24)



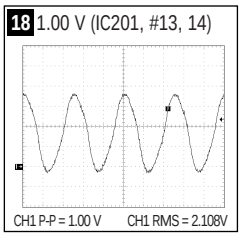
17 20.0 V (IC103, #1, 2, 3)



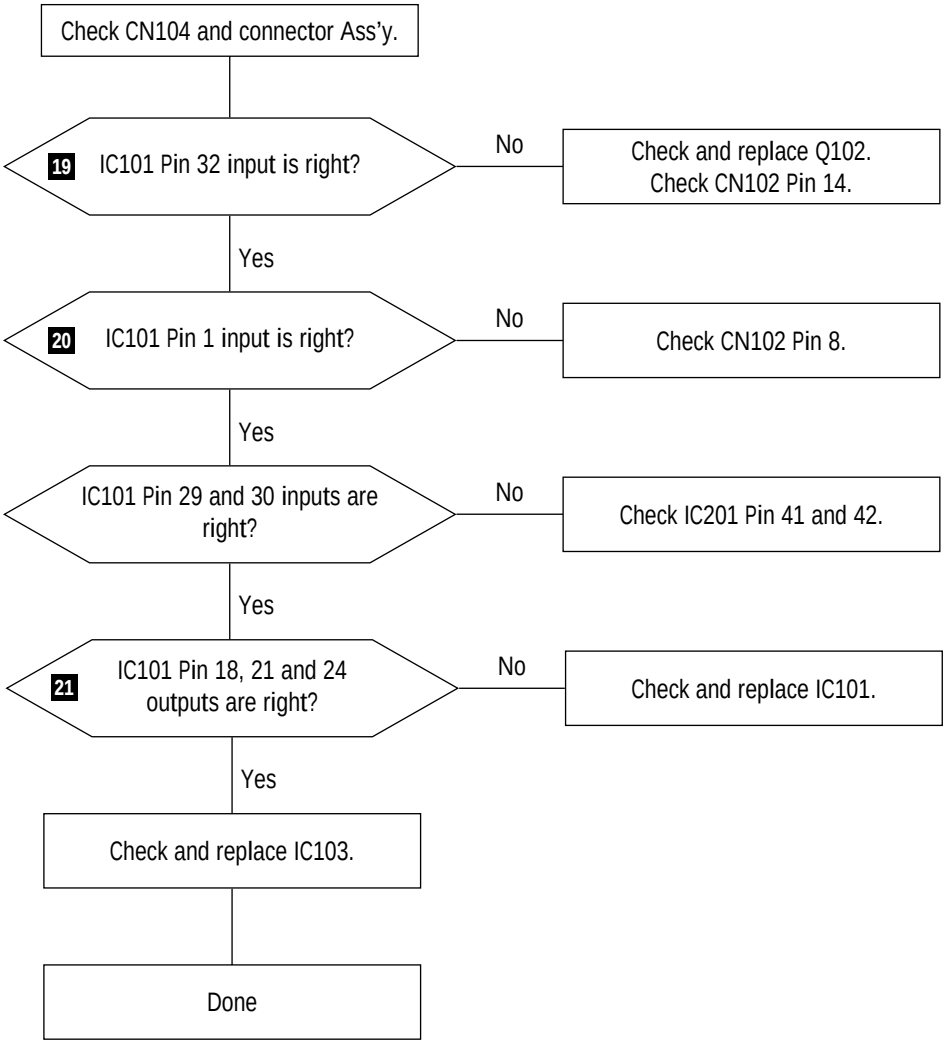
5-1-17 Micom Failure



WAVEFORMS

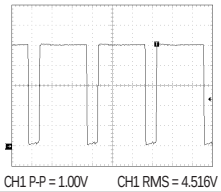


5-1-18 OSD Failure

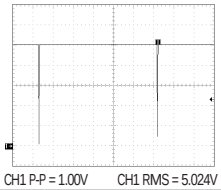


WAVEFORMS

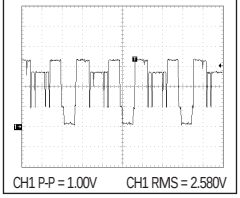
19 1.00 V (IC101, #32)



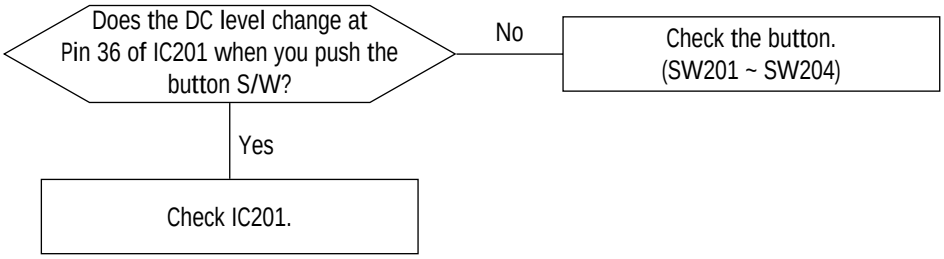
20 1.00 V (IC101, #1)



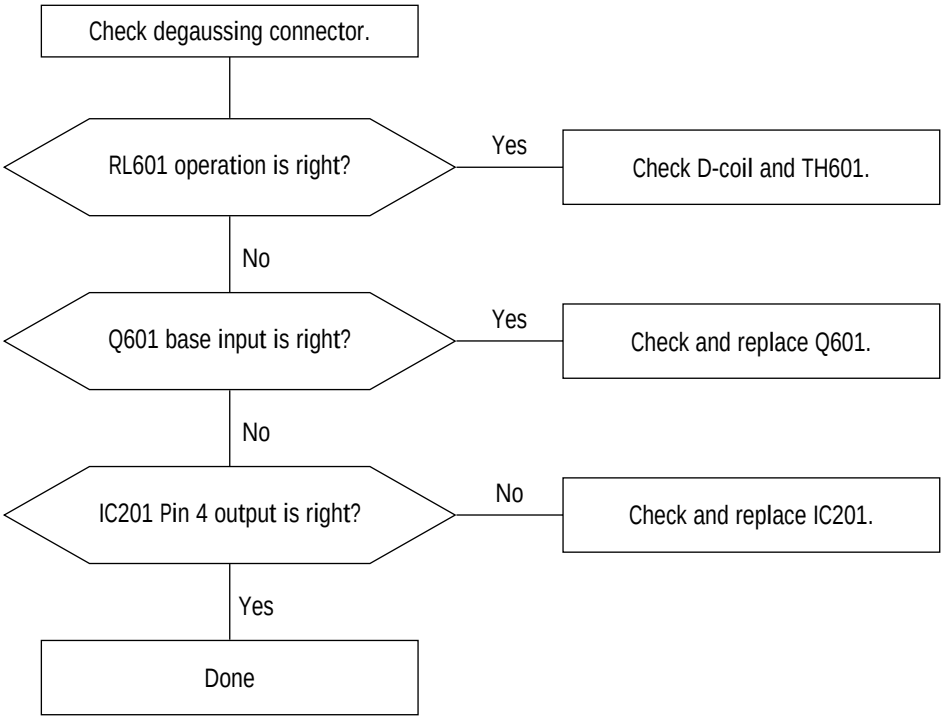
21 1.00 V (IC101, #18,21,24)



5-1-19 User Control Failure

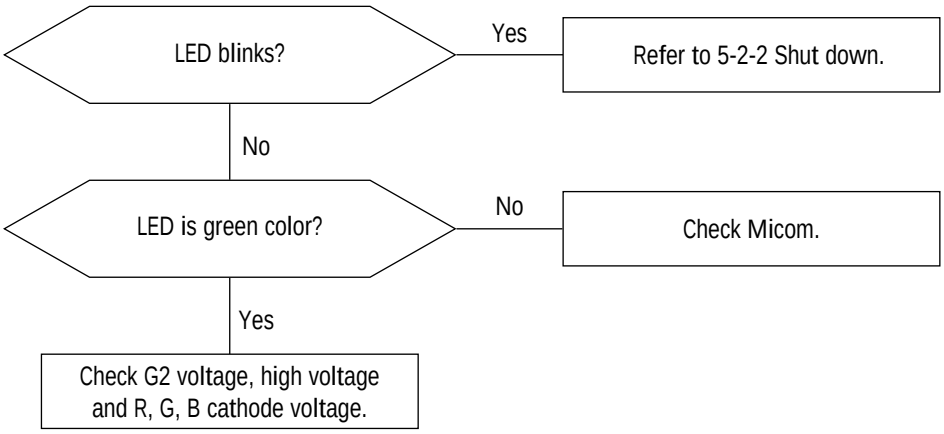


5-1-20 Degaussing Failure

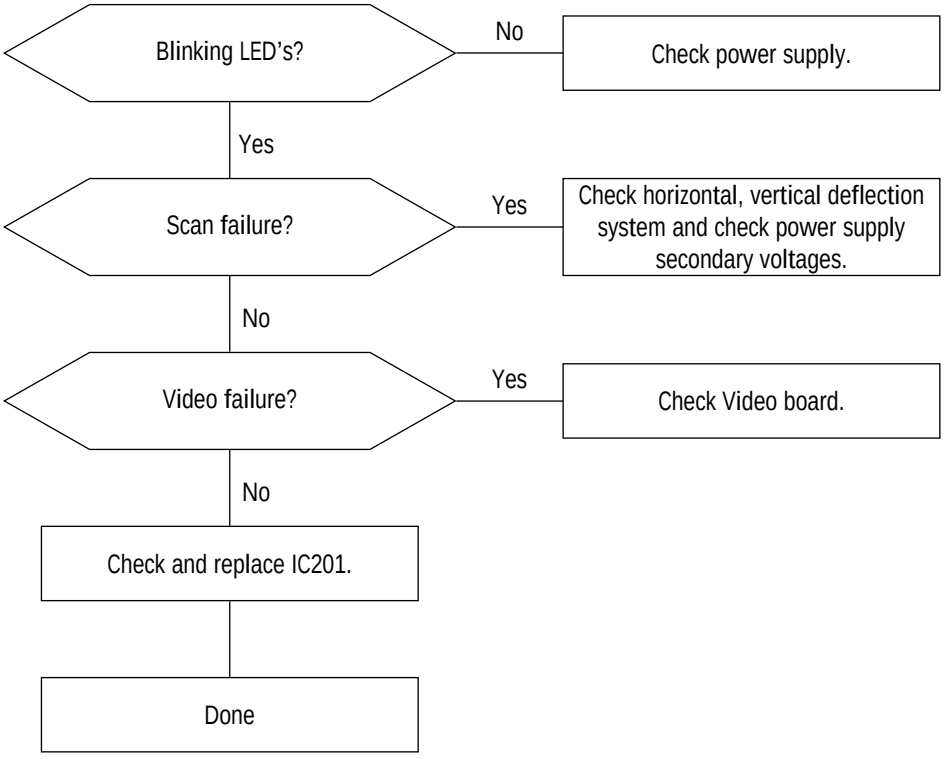


5-2 General Troubleshooting

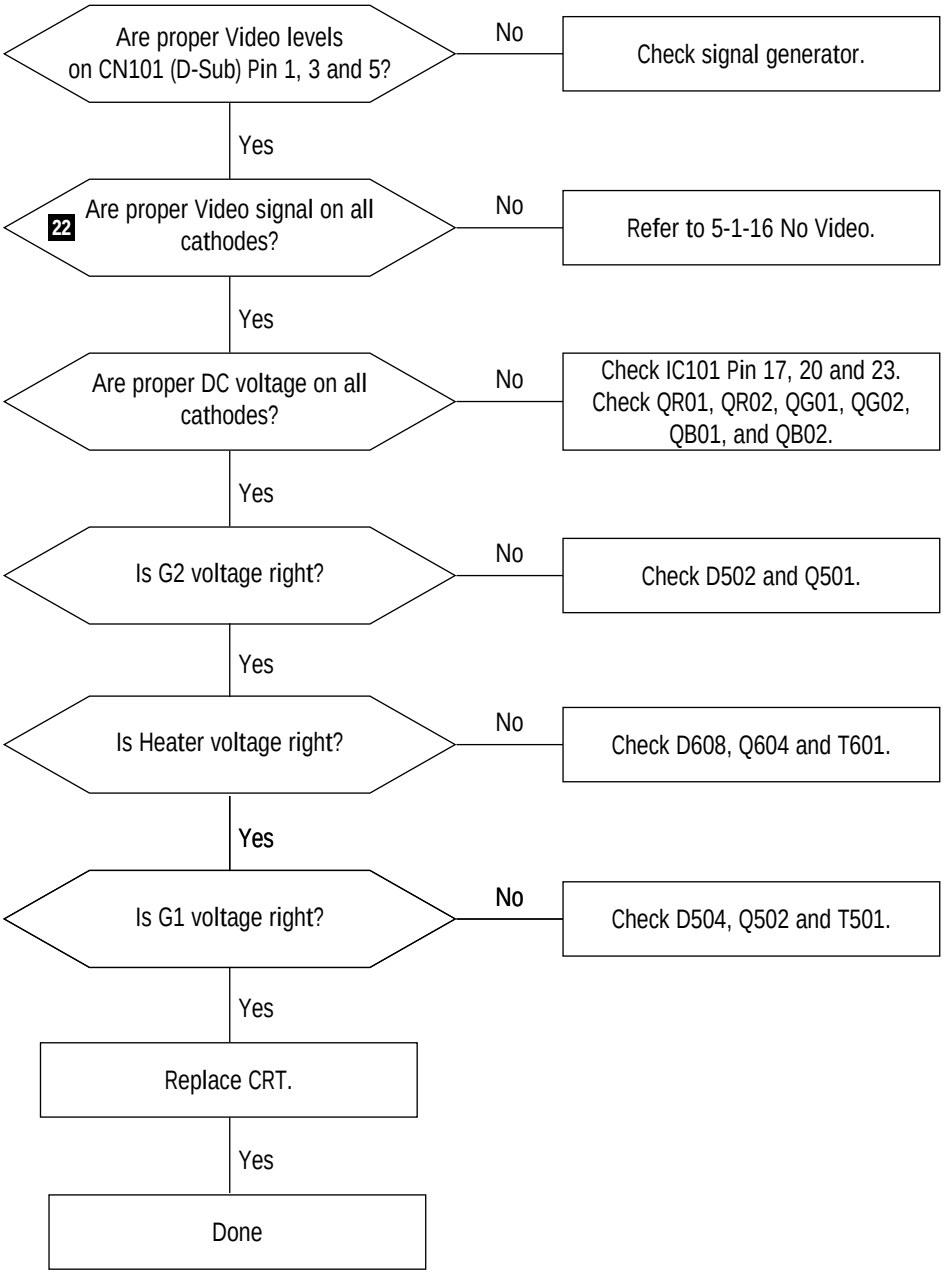
5-2-1 No Picture



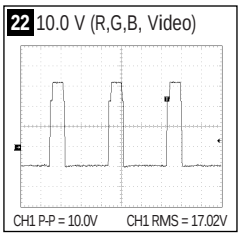
5-2-2 Shut Down



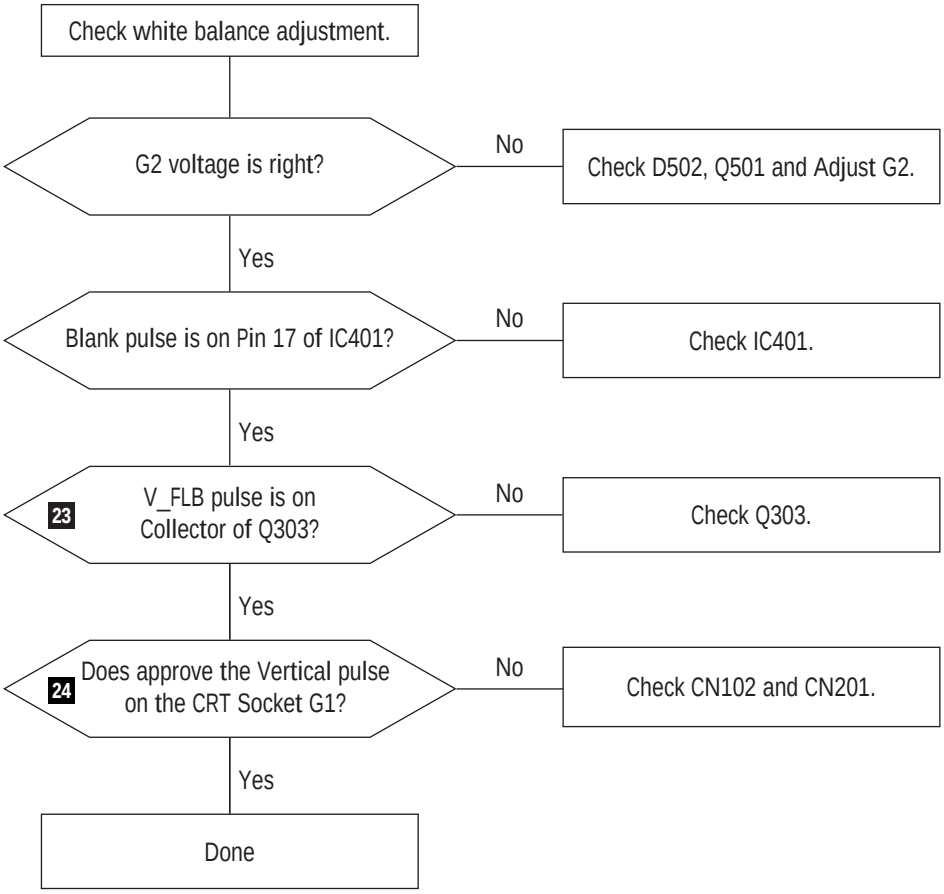
5-2-3 Missing Color



WAVEFORMS

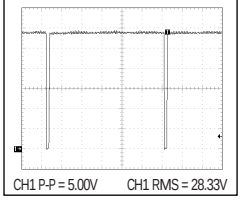


5-2-4 Visible Retrace

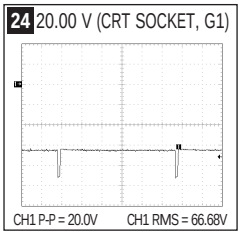


WAVEFORMS

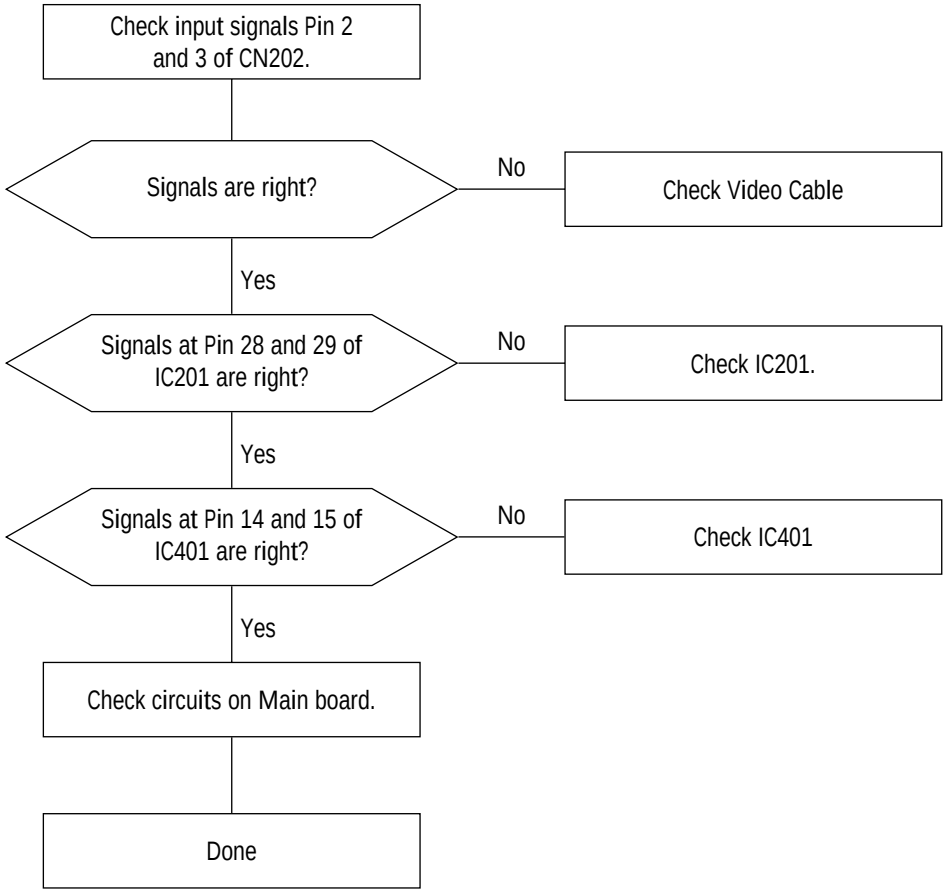
23 5.00 V (Q303, Collector)



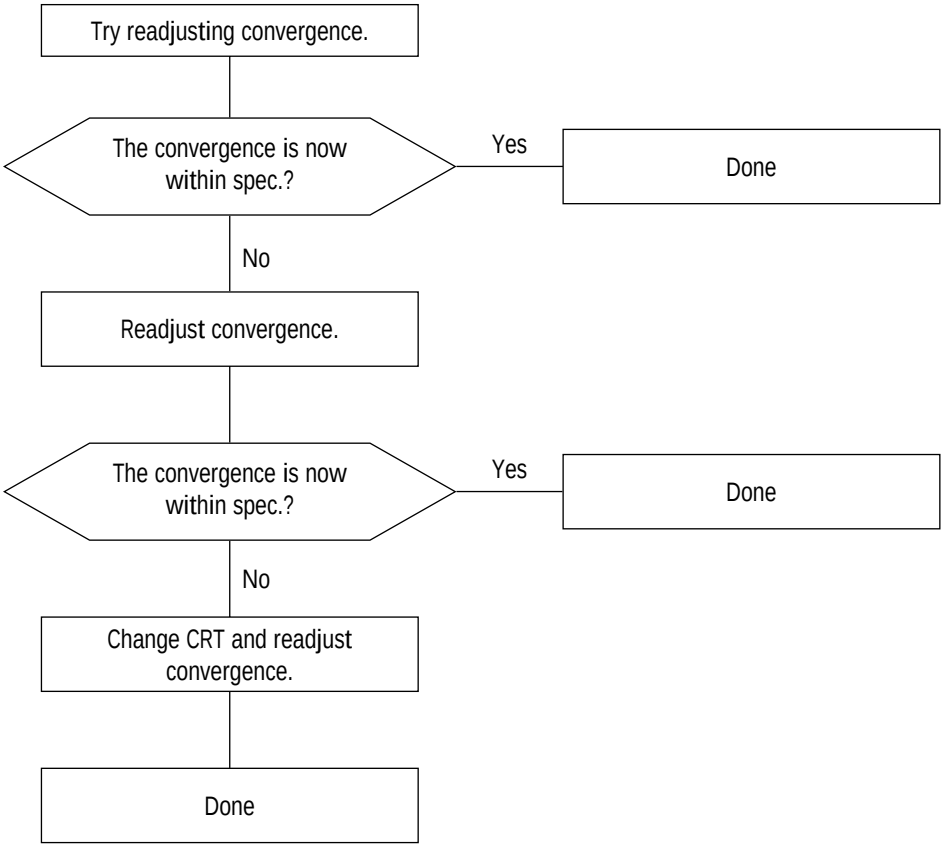
24 20.00 V (CRT SOCKET, G1)



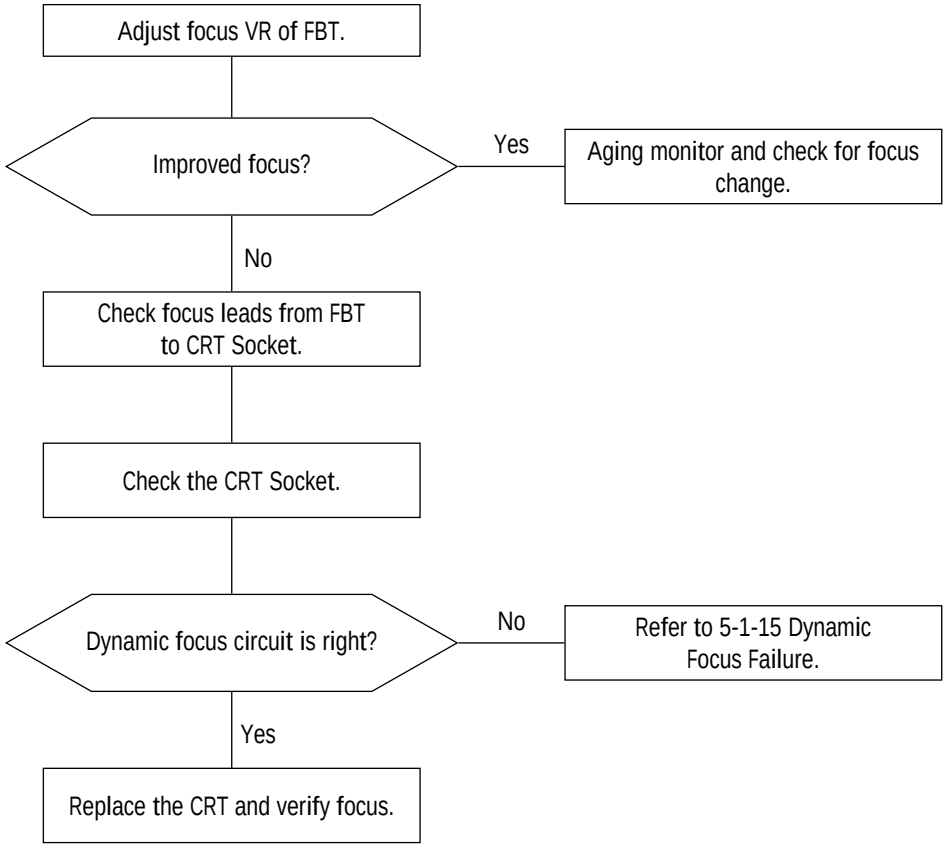
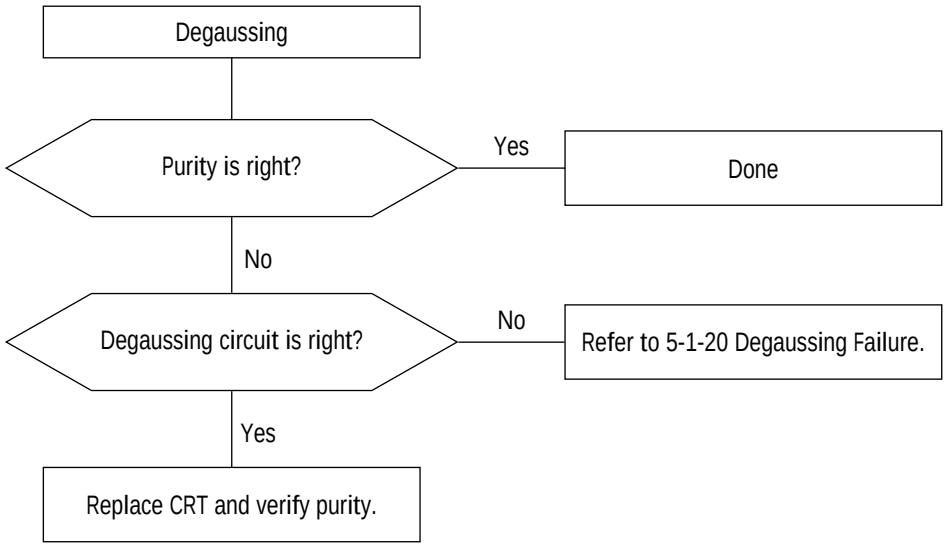
5-2-5 Unsynchronized Image



5-2-6 Misconvergence



5-2-7 Poor Focus



5-2-8 Purity Failure